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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/788,863	02/27/2004	Joseph H. Sassine	I69.12-0600	7195

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EXAMINER	
WATKO, JULIE ANNE	
ART UNIT	PAPER NUMBER
2627	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/09/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/788,863	SASSINE ET AL.	
	Examiner	Art Unit	
	Julie Anne Watko	2627	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-3,5-20 and 26-31* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3,5,6,8-20 and 26-31* is/are rejected.

7)☒ Claim(s) *7* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *02/27/2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. Applicant has overcome the indefiniteness rejections by amendment.

Claim Rejections - 35 USC § 102

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Claims 1, 9-10, 12-16 and 27 are rejected under 35 U.S.C. 102(b) as being anticipated by Nakamura et al (US Pat. No. 6212043 B1).

The product by process limitations in these claims (e.g., "no external structural damping material attached", "separately made and attached") are directed to the product per se, no matter how actually made, *In re Hirao*, 190 USPQ 15 at 17 (footnote 3). See also *In re Brown*, 173 USPQ 685; *In re Luck*, 177 USPQ 523; *In re Fessman*, 180 USPQ 324; *In re Avery*, 186 USPQ 161; *In re Wertheim*, 191 USPQ 90 (209 USPQ 554 does not deal with this issue*); In re Marosi et al*, 218 USPQ 289; and particularly *In re Thorpe*, 227 USPQ 964, all of which make it clear that it is the patentability of the final structure of the product "gleaned" from the process limitations or steps, which must be determined in a "product by process" claim, and not the patentability of the process limitations. Moreover, an old or obvious product produced by a new method is not a patentable product, whether claimed in "product by process" claims or not. Note that the applicant has the burden of proof in such cases, as the above case law makes clear.

Due to similarities in the claimed subject matter, the independent claims are treated together.

As recited in independent claims 1 and 16, to the extent understood, Nakamura et al show a head suspension assembly comprising a beam component (see position b in Fig. 6C) having a front (left in Fig. 6C) end and a rear (right) end; a hinge component 43, wherein the hinge component 43 comprises a first structural damping material 14 having a modulus of elasticity greater than approximately 10 gigapascals (see table 1, example 3, which shows a modulus of elasticity of 20000 kg/mm^2 > 10 gigapascals), and the hinge component is at the rear (right) end of the beam component; and a gimbal component (to which 1 is attached; see appearance of Figs. 2A-C, for example) near the front (upper in Fig. 2A-C) end of the beam component for connecting to a slider assembly 1 carrying a transducer (see col. 1, line 17, "to effect read/write").

Regarding the limitation "for connecting to an actuation arm": A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. Applicant has failed to present any evidence that the structure of Nakamura et al is incapable of connecting to an actuation arm.

As recited in claim 9, Nakamura et al show that structural damping material 14 having a modulus of elasticity greater than approximately 30 gigapascals (see table 1, example 3, which shows a modulus of elasticity of 20000 kg/mm^2 > 30 gigapascals).

As recited in claim 10, Nakamura et al show that structural damping material 14 having a modulus of elasticity greater than approximately 50 gigapascals (see table 1, example 3, which shows a modulus of elasticity of 20000 kg/mm^2 > 50 gigapascals).

As recited in claims 12 and 27, Nakamura et al show that the structural damping material 14 is a laminate comprising a stainless steel (see col. 3, lines 63-66) layer 15 and a damping material 16 layer.

Regarding claims 13 and 15: See above discussion of "product by process" claims.

As recited in claim 14, Nakamura et al show that the hinge component 15 is attached to the beam component through an adhesive 16.

Claim Rejections - 35 USC § 103

4. Claims 1-3, 5-6, 8, 11-12, 16-20 and 26-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sassine et al (US PAP No. 2005/0135013 A1).

The applied reference has a common inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

The product by process limitations in these claims (e.g., "no external structural damping material attached", "separately made and attached") are directed to the product per se, no matter how actually made, *In re Hirao*, 190 USPQ 15 at 17 (footnote 3). See also *In re Brown*, 173 USPQ 685; *In re Luck*, 177 USPQ 523; *In re Fessman*, 180 USPQ 324; *In re Avery*, 186 USPQ 161; *In re Wertheim*, 191 USPQ 90 (209 USPQ 554 does not deal with this issue); *In re Marosi et al*, 218 USPQ 289; and particularly *In re Thorpe*, 227 USPQ 964, all of which make it clear that it is the patentability of the final structure of the product "gleaned" from the process

limitations or steps, which must be determined in a "product by process" claim, and not the patentability of the process limitations. Moreover, an old or obvious product produced by a new method is not a patentable product, whether claimed in "product by process" claims or not. Note that the applicant has the burden of proof in such cases, as the above case law makes clear.

As recited in independent claims 1 and 16, to the extent understood, Sassine et al show a head suspension assembly (see Fig. 15 or Fig. 16, for example) comprising a beam component 400 having a front (right end in Figs. 15-16) end and a rear (left) end; a hinge component ("hinge area", see, e.g., ¶ 0056), wherein the hinge component comprises a first structural damping material (414, for example) having high stiffness (see ¶ 0056, "Stiffness") and high damping capacity (see ¶ 0062, "especially effective in significantly attenuating gain of resonance modes"), and the hinge component is at the rear (left) end of the beam component; and a gimbal component (see, e.g., ¶ 0058, "gimbal") near the front end of the beam component for connecting to a slider assembly 409 carrying a transducer (see ¶ 0058, "read/write").

Regarding the limitation "for connecting to an actuation arm": A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. Applicant has provided no evidence that the suspension assembly of Sassine et al is incapable of connecting to an actuation arm.

As recited in independent claims 1 and 16, Sassine et al are silent regarding the first structural damping material having a modulus of elasticity greater than approximately 10 gigapascals.

It is notoriously old and well known in the magnetic head art to routinely modify a magnetic head structure in the course of routine optimization/ experimentation and thereby obtain various optimized ranges of modulus of elasticity, including those set forth in claims 1 and 16.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to arrive at the claimed modulus of elasticity in the course of routine experimentation and optimization. The rationale is as follows: one of ordinary skill in the art would have been motivated to achieve desired flying and resonance characteristics as is notoriously well known in the art.

Moreover, absent a showing of criticality (i.e., unobvious or unexpected results), the ranges set forth in claims 1 and 16 are considered to be within the level of ordinary skill in the art.

Additionally, the law is replete with cases in which when the mere difference between the claimed invention and the prior art is some range, variable or other dimensional limitation within the claims, patentability cannot be found.

It furthermore has been held in such a situation, the Applicant must show that the particular range is critical, generally by showing that the claimed range achieves unexpected results relative to the prior art range. *In re Woodruff*, 919 F.2d 1575, 1578, 16 USPQ2d 1934, 1936 (Fed. Cir. 1990).

As recited in claims 2 and 19, Sassine et al show that the hinge component is made from the first structural damping material (414, for example), and the gimbal is made from a second structural damping material (420 or 444, for example).

As recited in claims 2 and 19, Sassine et al are silent regarding the claimed range of modulus of elasticity.

See teachings, rationale, and motivation above for claims 1 and 16.

As recited in claims 3 and 20, Sassine et al show that the first structural damping material 414 and the second structural damping material 420 are substantially identical in composition (see ¶ 0055, "polyimide").

As recited in claim 5, Sassine et al show that the hinge component ("hinge area", see, e.g., ¶ 0056) applies a preload ("preload bend", see ¶ 0057) on the transducing head 409 through the beam component 400.

As recited in claims 6 and 17, Sassine et al show that the entire hinge component is substantially made from the first structural damping material only (the term "first structural damping material" is broad enough to include a laminate, as evidenced by claim 12; thus, the etched laminate which constitutes the hinge component in Fig. 15 satisfies the limitation "substantially made from the first structural damping material only").

As recited in claim 8, Sassine et al show that the hinge component has no external structural damping material attached thereto (see Fig. 15). See also above discussion of product-by-process claims. Because the constituent parts are so combined as to constitute a unitary whole, Applicant has failed to demonstrate that any of these parts so combined must be interpreted as "external" in the context of the broadest reasonable interpretation of the claims. While the assembly comprises several parts, they are secured together as a single unit, which is integral, such that no part is "external". See *In re Larson*, 144 USPQ 347 (CCPA 1965). Furthermore, even if Applicant were to persuade the Examiner that any particular part were

necessarily interpreted as "external" to the unitary whole, there would be no invention in making integral parts separable, nor in making separate parts integral, absent unexpected results due to the integration or separation, provided that the integration or separation was within the level of ordinary skill in the art. See *In re Fridolph*, 135 USPQ 319 (CCPA 1962).

As recited in claims 11, 18 and 29, Sassine et al show that the structural damping material is an alloy (see ¶ 0059, "blend of two or more materials").

As recited in claims 12, 27 and 30, Sassine et al show that the structural damping material is a laminate comprising a stainless steel layer and a damping material layer (see ¶ 0055, "two steel sheets sandwiching a polyimide (or other material) core").

Regarding claims 13-15: See above discussion of "product by process" claims.

As recited in claims 26, 28 and 31, Sassine et al show that the structural damping material is a composite (see teachings above for claims 11-12, 18, 27 and 29-30).

Allowable Subject Matter

5. Claim 7 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

6. Applicant's arguments filed December 12, 2006, have been fully considered but they are not persuasive.

On page 7, Applicant argues that "Independent claims 1 and 16 both recite a head suspension assembly, which includes a hinge component and a gimbal component at least one of which is made from, in whole or in part, a structural damping material. Nakamura does not

disclose, teach, or suggest either a hinge or gimbal made from a structural damping material. Nakamura discloses pasting a damping material to an existing head suspension assembly."

The Examiner has considered this argument thoroughly and asserts that Applicant's claims are drawn to a product, not to a process. Applicant's attempt to distinguish the processes by which Nakamura et al and Applicant manufacture head suspension assembly products is insufficient to establish any difference in the products gleaned from said processes.

The product by process limitations in these claims are directed to the product per se, no matter how actually made, *In re Hirao*, 190 USPQ 15 at 17 (footnote 3). See also *In re Brown*, 173 USPQ 685; *In re Luck*, 177 USPQ 523; *In re Fessman*, 180 USPQ 324; *In re Avery*, 186 USPQ 161; *In re Wertheim*, 191 USPQ 90 (209 USPQ 554 does not deal with this issue); *In re Marosi et al*, 218 USPQ 289; and particularly *In re Thorpe*, 227 USPQ 964, all of which make it clear that it is the patentability of the final structure of the product "gleaned" from the process limitations or steps, which must be determined in a "product by process" claim, and not the patentability of the process limitations. Moreover, an old or obvious product produced by a new method is not a patentable product, whether claimed in "product by process" claims or not. Note that the applicant has the burden of proof in such cases, as the above case law makes clear.

Regardless of the order in which materials are shaped and assembled in a manufacturing process, the same products are gleaned from the process of Nakamura et al and Applicant's process.

Applicant has failed to present any evidence to satisfy Applicant's burden to prove some patentable difference between the prior art and claimed products; thus, Applicant has failed to overcome the rejection of the independent claims, which is maintained and made final.

Similarly, on page 8, Applicant argues that "Independent claims 1 and 16 both recite a head suspension assembly, which includes a hinge component and a gimbal component at least one of which is made from, in whole or in part, a structural damping material. Sassine discloses attaching a damping layer (and a sealing layer over the damping layer) to the suspension assembly as a distinct component, but nowhere does Sassine disclose or teach making the components of the suspension assembly, in whole or in part, from a structural damping material."

The Examiner has considered this argument thoroughly and asserts that Applicant's claims are drawn to a product, not to a process. Applicant's attempt to distinguish the processes by which Sassine et al and Applicant manufacture head suspension assembly products is insufficient to establish any difference in the products gleaned from said processes.

Furthermore, an integral, unitary whole can be made of what Applicant refers to as a "distinct component" in situations where said distinct component is attached to other distinct components. See *In re Larson*, 144 USPQ 347 (CCPA 1965). Moreover, even if Applicant were to persuade the Examiner that any particular part were necessarily interpreted as "external" to the unitary whole, there would be no invention in making integral parts separable, nor in making separate parts integral, absent unexpected results due to the integration or separation, provided that the integration or separation was within the level of ordinary skill in the art. See *In re Fridolph*, 135 USPQ 319 (CCPA 1962).

The product by process limitations in these claims are directed to the product per se, no matter how actually made, *In re Hirao*, 190 USPQ 15 at 17 (footnote 3). See also *In re Brown*, 173 USPQ 685; *In re Luck*, 177 USPQ 523; *In re Fessman*, 180 USPQ 324; *In re Avery*, 186

USPQ 161; *In re Wertheim*, 191 USPQ 90 (209 USPQ 554 does not deal with this issue); *In re Marosi et al*, 218 USPQ 289; and particularly *In re Thorpe*, 227 USPQ 964, all of which make it clear that it is the patentability of the final structure of the product "gleaned" from the process limitations or steps, which must be determined in a "product by process" claim, and not the patentability of the process limitations. Moreover, an old or obvious product produced by a new method is not a patentable product, whether claimed in "product by process" claims or not. Note that the applicant has the burden of proof in such cases, as the above case law makes clear.

Regardless of the order in which materials are shaped and assembled in a manufacturing process, the same products are gleaned from the process of Sassine et al and Applicant's process.

Applicant has failed to present any evidence to satisfy Applicant's burden to prove some patentable difference between the prior art and claimed products; thus, Applicant has failed to overcome the prior art used in the rejection of the independent claims.

Dependent claims are argued only by virtue of their dependency from the independent claims. Thus, Applicant's arguments are similarly non-persuasive.

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Shiraishi (US Pat. No. 6636382 B2) shows a multilayer suspension and head gimbal assembly (see especially process steps shown in Figs. 3a-3f and product shown in Fig. 5).

9. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Julie Anne Watko whose telephone number is (571) 272-7597. The examiner can normally be reached on Monday through Friday, 1PM to 10PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dwayne D. Bost can be reached on (571) 272-7023. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Julie Anne Watko, J.D.
Primary Examiner
Art Unit 2627

January 4, 2007
JAW